

ABSTRACT OF THE DISCLOSURE

The invention relates to a holographic viewing device that enables a bright reconstructed pattern to be viewed in place of light sources in a scene while a spot 5 due to zero-order transmitted light is kept unnoticeable, and a computer-generated hologram for the same. The invention provides a holographic viewing device comprising a frame and a computer-generated hologram fitted in the frame. The computer-generated hologram is constructed as 10 a transmission Fourier transform hologram. The computer-generated hologram comprises minuscule cells having pitches  $\delta_x$  and  $\delta_y$  with a reconstruction image area defined by a range of spreading of  $\pm$  first-order diffracted light of given wavelength from a diffraction grating having 15 grating pitches  $2\delta_x$  and  $2\delta_y$  that are twice as large as said pitches of cells, and an input image pattern 35 reconstructed at that wavelength is recorded in the computer-generated hologram in such a way that a light portion 36 of the input image pattern overlaps the center 20 of the reconstruction image area.